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A

John Bell

DISCOURSE

UPON THE INSTITUTION OF

MEDICAL SCHOOLS

IN AMERICA;

Delivered at a Public ANNIVERSARY COMMENCEMENT, held in the COLLEGE of PHILADELPHIA
May 30 and 31, 1765.

WITH A

PREFACE

Containing, amongst other things,

THE AUTHOR'S

APOLOGY

For attempting to introduce the regular mode of
practising PHYSIC in PHILADELPHIA :

BY JOHN MORGAN M.D.

Fellow of the Royal Society at LONDON; Correspondent of the Royal Academy of Surgery at PARIS; Member of the Arcadian *Belles Lettres* Society at ROME; Licentiate of the Royal Colleges of Physicians in LONDON and in EDINBURGH; and Professor of the Theory and Practice of Medicine in the College of PHILADELPHIA.

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T O
SAMUEL POWEL, ESQUIRE,
Of PHILADELPHIA.

S I R,

 THE following discourse was written for the most part at Paris, and served as an agreeable relaxation from the severer studies in which I was, at that time, engaged. Our travelling together gave me an opportunity of submitting the performance to your critical eye, and it affords me a singular satisfaction to acknowlege, that, in several particulars, it has been greatly amended by your candid and judicious remarks.

UPON

UPON such an occasion as this, I should deem myself ungrateful indeed, was I to withhold the little tribute I have in my power to pay to that genuine worth and disinterested friendship, which I have experienced in you.

SURE I am that a person of your amiable disposition, whose heart glows with the utmost warmth of social affection, whose mind is enriched with the treasures of ancient and modern learning, and whose taste has been improved and refined, by an acquaintance and conversation with men of the first rank in life and of the greatest abilities in the learned world, must be eminently useful to mankind, and particularly adorn and bless the land wherein providence calls him to reside. With great reason, therefore, may we hope to see you become a distinguished ornament to society. With great reason may the place of your nativity claim the advantages which arise from such abilities, and
from

from a genius that was formed and nurtured in her own bosom. Your country has much to expect in waiting the return of a son blessed with so many useful endowments; and I well know that, amongst your many other virtues, the love of your country prevails too much in your breast to let her sustain a disappointment.

OPULENCE and generosity seldom go hand in hand. The gifts of fortune are rarely accompanied with a spirit to employ them in deeds of charity and disinterested benevolence.

It is yours, Sir, to soar above the sordid views of vulgar minds, and enjoy the sublime pleasures of a tender and sympathizing humanity, which always carries its own reward, in the satisfaction that flows from the exercise of so precious a gift of divine bounty.

THERE are no connections in life more honourable than those which we form with men of learning and virtue.

I cannot but congratulate myself, therefore, on the strict intimacy with which you have so long indulged me, and, at the same time, be thankful to you for the advantages it has often procured me in foreign parts.

DURING an absence of five years from my country and friends, whilst I was engaged in such pursuits as were indispensably necessary to fit me for more extensive usefulness in my profession, the almost uninterrupted enjoyment of your company, or correspondence, contributed much to make such a separation more easy and supportable. It will always give me unspeakable pleasure to reflect upon the variety of scenes through which we have passed, and the entertainment and improvement we have met with, in visiting the principal cities and seats of science in Great-Britain, Holland, France and Italy ; places celebrated for the birth or residence of men of the most illustrious genius in the world,

world, and distinguished for the cultivation of manners, polite arts and literature.

THESE are the several considerations that have induced me to present you with this performance. Happy should I have thought myself, if a little more leisure had enabled me to render it somewhat more worthy your notice. Such as it is, however, I request you to accept it as a small testimony of my personal regard and affection for you. Whatever may be the merit or success of the work itself, I shall always rejoice that it has given me an opportunity of telling the world, how much I respect your character, and what an high value I place upon your friendship.

I am,

Dear Sir,


Your most affectionate friend

and obliged humble servant,

JOHN MORGAN.



P R E F A C E.

HE delay in publishing my address on the institution of Medical schools arose from the indispensable calls of business. It has given me an opportunity, however, of hearing the opinion of many people upon the address ; but more particularly upon what relates to my proposed method of practising physic.

My intention with regard to the latter, having been made known by general conversations only, I find has been often misunderstood. No wonder then, if, in consequence thereof, it has been sometimes greatly misrepresented.

THIS has determined me to commit to the press the plan of practice by which I design to regulate myself as much as possible ; and to deliver my sentiments very briefly on the expediency of a regular and distinct practice in the several branches of Medicine. The public will then be able to judge more clearly

clearly of the propriety of those measures, which, from a full persuasion of their great utility, I venture to recommend.

First, I purpose to confine myself, in practice, to those cases which belong most immediately to the office of a Physician, that I may prescribe for and attend such cases to greater advantage. I shall therefore avoid, all I can, interfering in the proper business of surgery viz. manual operation.

I do not mean however to refuse to inoculate for the small-pox, where my patients or their friends object to employ another hand to make the incision. This may frequently happen, although there is no more difficulty or art required in it, than in cutting an issue and inserting a pea, or than in cupping and bleeding.

Secondly, I propose, in such cases as shall be required, to attend in consultation with other Physicians, on the same terms as those of character enter into consultation with one another.

Thirdly, I shall give my opinion in writing on the complaints of patients at a distance from Philadelphia, whenever the history of the case is properly drawn up and transmitted to me for advice.

Fourthly,

Fourthly, In such cases of surgery as require consultation, or the use of medicines, I am willing to attend, to prescribe, consult, or advise; but not to perform any operation myself, or dress any wound.

IN REGARD TO THE APOTHECARY AND SURGEON.

It may be proper here to acquaint the public, that, for the better carrying of this plan into execution, Mr. *David Leighton*, a gentleman of abilities and integrity, educated in Great-Britain both in pharmacy and surgery, has accompanied me hither. To him I send to make up my prescriptions. But patients are allowed to choose any other apothecary to put up their medicines, or what surgeon they please for the operative part. What I expect from them is a proper compensation for my advice and attendance as a physician. The medicines and operations are to be considered as a distinct and separate charge. Mr. *Leighton* has imported a large assortment of medicines, in which no expence has been spared, to have every thing of the best in its kind. They have been prepared with particular care by Messrs. *Silvanus* and *Timothy Bevan*, Druggists in London, whose known skill and reputation in that business are too well established, both in Great-Britain and America, to need further recommendation.

Mr. LEIGHTON will oblige himself to put up such prescriptions as are ordered, in the best manner, and with the utmost fidelity and care, as well as at the most moderate rate.

A S T O F E E S.

I always mean that these shall be moderate, adapted to the circumstances of this place, of the patient and the attendance he may require.

As a rule of conduct to such as are quite unacquainted with the regular practice of physic, let them inform themselves what is the united expence for Medicines and attendance, as charged by the practitioners of eminence in this place. In such cases as can be exactly ascertained, I shall require no more from them, than they would be obliged to pay to others, as in the case of inoculation and attendance in the small pox ; allowance being made for the Medicines. The same rule, as far as it can be observed in fevers and other disorders, might be applied.

PRACTITIONERS in many cases make an advanced charge on their Medicines, so as to include for attendance. This is done to make up for the patients deficiency in fees, than which, when it is willful and not the effect of ignorance in the patient, nothing can be more equitable, or more expedient, except

cept charging for attendance under its proper name. For Practitioners must be paid for their time and attendance, as well as for their Medicines, under whatever name they make the charge. Indeed the most extensive practice otherwise would be insufficient to support a family in a becoming manner, as the greatest part of their time is employed in visiting the sick. The paying of a physician for attendance and the apothecary for his Medicines apart is certainly the most eligible mode of practice, both to patient and practitioner. The apothecary then, who is not obliged to spend his time in visiting patients, can afford to make up medicines at a reasonable price; and it is as desirable, as just in itself, that patients should allow fees for attendance, whatever it may be thought to deserve. They ought to know what it is they really pay for Medicines, and what for physical advice and attendance.

NOBODY, I believe, will deny that the practice of rating Medicines, at such a price as to include the charge for Medicines and attendance, is liable to gross impositions on the part of ignorant medicafters, too many of whom swarm in every city. Patients who are kept in ignorance of what price Medicines are, considered separately, and what is the value of physical skill and attendance, naturally think the original cost of Medicines, which are comparatively cheap, to be very dear, and undervalue the skill of a physician,
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his toil of study and his expence of time and money in his education, which have often amounted to very large sums and to many years spent abroad in quest of knowledge, as if they were of no consideration.

THE levelling of all kind of practitioners so much with illiterate pretenders, who have art enough to gain employ, however ill qualified in that of healing diseases, has a tendency to deter persons, otherwise of just and liberal sentiments, from putting themselves to a further expence to gain knowledge, than what is sufficient to make money. This is to make a vile trade of physic, instead of a noble profession, which as it certainly is, so it ought to be esteemed.

I HAVE been told more than once, upon reasoning on the subject, that people here are used to this method and dont love to change old customs. What is it more than to say,

“ Si populus vult decipi, decipiatur

If people choose to be deceived, even let us keep them in their deception.” ?

INSTEAD of making a charge of fees, I willingly leave to the patients themselves to give what
they

they please, upon my dismissal from further attendance, or as soon after their recovery as shall be thought convenient, without specifying any demand, unless where patients particularly require it. This I look for to prevent the necessity of making a book charge of fees, which is never done in any liberal profession.

By thus leaving the fee in a great measure, or wholly, to the free will and circumstances of the patient, a physician may be employed by the middling class of people as well as the rich.

MANY who have no adequate notion of the true value of attendance, or what rule is observed by others, may wish rather to be directed what fee to pay for attendance, being desirous on one hand to avoid the appearance of being deficient in generosity, and on the other hand willing to recompence the physician for his care, without unnecessary prodigality. Such persons, upon intimation of their desires, it is to be hoped, will always find themselves fully satisfied in this particular.

As to attending poor patients gratis, and giving them my best advice ; I shall chearfully take my share of that kind of practice with my brethern of the faculty. For I shall always esteem it a favourable circumstance,

stance, that puts it in my power to administer relief to persons, whose indigence forbids them to expect it upon any other terms.

THESE articles, I presume, will effectually remove the objection which has been most strongly urged, viz. that my method of practice would only suit the wealthy; and will prove that the expence to the patient is not greater, on the plan I have adopted, than in the common method of practice.

IT is true that, upon my first arrival, I expressed my desire of being paid for a certain number of visits, at a pistole the first visit, as a retaining fee, and a dollar for every visit afterwards.---It was not my intention to require more than one fee per day, although I might wait on the patient oftner, nor yet every day that I visited once, where a disease of a lingering nature, or requiring particular care, would render my attendance expensive. A retaining fee I expected to receive from the rich, not from the poor; and had firmly resolved in no case to receive more fees, than sufficient to pay me for the value of my time and trouble of attendance. But for want of suitable opportunities of rendering this better known, I daily found that my good intention was in some measure frustrated.

THIS, and the advice of some judicious friends to endeavour to prevent the ill effects of prejudice, made me resolve to attempt such an alteration as might be better suited, at this time, to the customs and circumstances of the people.

THE preceeding plan I have ever since constantly followed, to my entire satisfaction, and I hope to that of my patients. Truth requires of me to acknowledge to the public, that I have always found, as far as my practice has hitherto given me an opportunity of judging, that the insinuation, which has been made to deter me from this mode of practice, viz. *that people are too narrow minded here, and show no generosity to a physician, only employing a doctor because he is cheap or lives near to them*, is utterly groundless. In most instances I have found their generosity has much exceeded my expectations.

ONE article more I have to mention under this head. It may frequently happen, in visiting my friends and acquaintance who employ me in their families, that themselves, their children or servants, may have slight complaints, for which they would be glad to have advice, but do not think them of importance enough to call in a physician, who may expect fees for little ailments. Such persons may always command my advice in these matters without a fee.

THE NECESSITY OF REGULATING THE PRACTICE OF PHYSIC.

It will be readily acknowledged by every one that allows himself to reflect upon it, that some regulation in regard to a Physicians attendance upon the sick is now become highly requisite. Formerly, when the city did not occupy much above half the extent, practice was much more manageable than it is at present. Living was then cheap. Within my own memory, every article of expence was less by almost one half. So that what suited the circumstances of the place and people then does not suit them now. Yet we may believe the knowledge of Physic has been cultivated all along with considerable application. A medical education is at least become much more expensive, and a man has little chance, if he keeps free from empiricism, to get a tolerable living by physic now, unless he has spent some years in an expensive education in Europe. Is it not then more equitable to be paid for attendance, than to live by advancing the price of medicines?

I AM not urging these as arguments for a more expensive practice, but for an improvement of it, by separating physic from surgery and pharmacy, which

I think incompatible with them, at least according to the plan of education I have followed, by the advice of some of the most eminent and skillful judges of medical science of any in Great Britain.

WHAT reasonable objection can be then offered against an improvement in the present method of the practice of physic, which, to a man in great business, is by every one allowed to be the most slavish profession known in this part of the world.

EVERY mechanic has a certain portion of time allotted to him for a relaxation from business, and for the enjoyment of social happiness. Physicians have next to none, but they are obliged to be at the call of the sick, every hour in the night as well as of the day. Were they born slaves to the public and not children? or, for such a voluntary surrender of their liberty and ease as is necessary to practise conscientiously, are they to have no compensation? Is it thought an unreasonable demand to be paid for a toilsome, but necessary attendance, amidst objects of the most moving distress, which deprives them much of the company of their own family and of a number of gratifications, which every other profession allows of without detriment? Where is the encouragement for a man to banish himself from all the endearing ties of friends and relations, to spend the prime of

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life, and often the bulk of his fortune, to administer more skillful aid to the calamities of his distressed fellow mortals, if he is to be considered as entitled only to the same gratuity with those who employ all their time at home, in getting money, instead of spending it for the public good? or is he to be allowed no more, than if, in acquiring this knowledge, he had been supported at a public expence? ---- let unbiaſſed reason and juſtice determine.

I am ſorry that the objections, which have been made to my propoſed method of practice, have laid me under the diſagreeable neceſſity of mentioning the kind of education I have had to qualify me for my profeſſion, and to afford me a reaſonable expectation of a living from my advice and attendance.

It is now more than fifteen years ſince I began the ſtudy of medicine in this city, which I have proſecuted ever ſince without interruption. During the firſt ſix years I ſerved an apprenticeship with Dr. JOHN REDMAN, who then did, and ſtills continues to enjoy a moſt juſtly acquired reputation in this city for ſuperior knowledge and extenſive practice in phyſic. At the ſame time I had an opportunity of being acquainted with the practice of other eminent phyſicians in this place, particularly of all the phyſicians

ficians to the hospital, whose prescriptions I put up there above the space of one year. The term of my apprenticeship being expired, I devoted myself for four years to a military life, principally with a view to become more skillful in my profession; being engaged, the whole of that time, in a very extensive practice in the army, amongst diseases of every kind. The last five years I have spent in Europe, under the most celebrated masters in every branch of Medicine, and spared no labour or expence to store my mind with an extensive acquaintance in every science, that related any way to the duty of a physician; having in that time expended, in this pursuit, a sum of money, of which the very interest would prove no contemptible income. With what success this has been done others are to judge, and not myself.

Thus I have arrived at the middle age of life, in endeavouring to lay up treasures of useful knowledge, before I commence a settled practice; and yet I have been told, that to expect to gain a support here by my medical advice and attendance only, without becoming a surgeon and apothecary too in order to help out, is to forget that I was born an American. I am very happy that my country has always discovered too much of a laudable ambition to excel in every branch of polite literature, and has taken too much pleasure in the reputation of her sons, to fill
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me with apprehension that an education in physic will be accounted too expensive, such as I have thought necessary to qualify myself for practising my profession with ease of mind to myself and with benefit to the community.

As far as I can learn, every body approves of my plan for instituting medical schools, and I have the honour of being appointed a public professor for teaching physic in the college here. Can any man, the least acquainted with the nature of that arduous task, once imagine it possible for me to acquit myself in that station, in an honourable or useful manner, and yet be engaged in one continued round of practice in surgery and pharmacy, as well as physic ?

To prepare for a course of lectures every year requires some leisure, and a mind undisturbed with too great a variety of pursuits. So that my usefulness as a professor makes it absolutely necessary for me to follow that method of practice, which alone appears to be calculated to answer that end. *

ON

* *Quid caret alternâ requie durabile non est,
Hæc reparat vires, fessaque membra novat.*

OVID.

ON THE ADVANTAGES OF A SEPARATE AND REGULAR PRACTICE OF PHYSIC, SURGERY AND PHARMACY.

In the more laborious occupations of life, as in building a house or a ship, a great variety as well as a great number of artizans are employed, but all in different departments.

In the less laborious callings we observe the like prudent regulations, thus in making a pipe, a button or a pin, a variety of hands, no less commonly than five, six, or seven different artists unite their industry. By this means they finish more work in a limited time, and can afford to sell it at a cheaper rate, than they could, if every individual was employed in all the separate branches. But each having a particular province assigned to himself, while all conspire in one uniform plan, they become more skillful and dextrous in their respective parts, and all more usefully subservient to one end. Are the good qualities of accuracy, dispatch and cheapness, not to speak of the greater perfection of the work, no recommendation to the manner of doing it?

WHY should the more difficult, but more ingenious and liberal arts, scorn to be taught wisdom from their example? Is it easier to understand the
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intricate structure of the animal frame, the work of God, than to learn the construction of any machine, as a watch or clock, the work of human invention? Or are the springs and movements of the former, so divinely adjusted, more easily managed and put to rights when in disorder, than the wheels of the latter? or does the preservation of this in a sound state require less study, knowledge, and conduct?

THE human body is certainly one of the most compound machines in nature. Medicine is one of the noblest and most difficult of arts, made up of a number of sciences different from each other. The practice of physic requires deliberation, reasoning, judgment, and experience. Surgery calls for different powers and qualifications rarely uniting in one man. Are these then all to be blended with the apothecary, the botanist, and chymist, which ought to be, and are each of them separate and distinct in their very nature? Whilst we labour amidst such a variety of pursuits, all improvement must be at a stand. Whereas, let each cultivate his respective branch apart, the physician, surgeon, apothecary &c. the knowledge of medicine will be then daily improved, and it may be practised with greater accuracy and skill as well as a less expence.

PREJUDICE may here ask, how can a physician practise with advantage, if he does not equally pursue

sue every branch of his profession ? or how shall he know that the Medicines are good, which he orders, if he does not prepare them himself ?

ANSWER, It is not only expedient, but necessary that a physician should have a general and extensive knowledge of the whole art, and be acquainted with the principles of every branch of his profession. Thus the general of an army should be acquainted with every part of military science, and understand the whole detail of military duty, from that of colonel down to a private sentinel. But there is no need that he should act as a pioneer and dig in a trench. Where a proper subordination is wanting, there is a perversion of all practical knowledge. No more then is a physician obliged, from his office, to handle a knife with a surgeon ; to cull herbs with the botanist ; to distill simples with the chymist ; or compound drugs with the apothecary. Can he be more sure however that his Medicines are genuine, if he does not collect his own herbs and roots as a botanist, or distill with the chymist, than he can, if, omitting these, he should stick to the plaister-pan and spatula, or the pestle and mortar ?

BUT practitioners in great business never do, or can do the business of an apothecary in this place, themselves. They have apprentices for
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the purpose. After visiting the sick, do not their apprentices make up their prescriptions? I would ask, is not an apothecary thoroughly acquainted with the art of compounding and making up Medicines as skillful in it as an apprentice? Is not a man educated in the profession to be trusted in preference to one who is only learning that business? or has the master, who may be called from place to place to attend other cases of surgery, or see other patients, always time to wait for medicines to be made up under his eye?

THESE queries are easy enough for every one to decide upon, without being brought up to the study of physic. Will he not therefore do a worthy action, whoever shall steadily apply himself to remove the difficulties which are in the way of regular practice? Will he not do real service to his country and mankind, for the good effects of which posterity may thank him? Who then would hesitate to rank himself amongst the foremost class of those who shall be concerned in a work of such real benefit to the public?

HAVING thus fully explained the method I propose for practising physic in this place, I appeal to the impartial judgment of the public to decide upon the question. Is it to be deemed an idle innovation, or is it not rather an improvement of practice in Philadelphia, to adopt a plan conformable to what is observed in great Britain and all polished countries,

as far as the circumstances of this place admit ? I profess myself open to conviction, and shall allow due weight to every reasonable argument that may be opposed to my plan. When I am rationally convinced that I have been in an error, I shall readily acknowledge and retract my sentiments, which I hope, till then, I may be allowed to continue, without being charged with an innovating spirit.

WHAT remains yet to be done is to endeavour to elucidate a few passages, which have been thought exceptionable in the discourse by particular persons.

IN some paragraphs, the opinions and practice of the faculty of physic in this place have been thought to have been too indiscriminately condemned.

FAR be it from me to merit this charge, or to have entertained sentiments derogatory from a set of gentlemen, many of whom I rank amongst my principle friends in the city, and highly esteem for their integrity and abilities in their profession, to which they do great honour. To have made a nominal distinction was never my design. It cannot therefore in justice be imputed to me as a fault to have avoided, all I could, every thing which had the least appearance of particularity, and to have endeavoured to suggest an improvement of practice, without aiming at practitioners.

I DOUBT not that every practitioner here of education, experience and integrity, has pursued the plan which, in his opinion, was best suited to the place and people. But as circumstances alter, so does the propriety of particular established customs, which gradually give way to others better suited to those changes which happen in a course of years. May I not hope to meet with the same candour that I show to others, and be admitted to act from the same honest principles, in recommending what I think an improvement of practice, that I allow those who have pursued a plan different from mine?

WHEREVER there is the least appearance of being particular, or wherever I have spoken expressly of the practitioners of this town, it has been in the most becoming manner and without the least censure, well knowing how much I myself need the indulgence of others,

“ *Mecum habito et novi
quam fit mihi curta suppellex.*”

IN confirmation hereof, I shall adduce a few instances to which the reader may refer. Thus I have said, p. 18. “ and here we may congratulate ourselves, that in this, and some of the large neighbouring towns, we have a number of skillful physicians”

and

and expert surgeons, qualified by genius, education and experience, to take charge of the health of their fellow creatures." And p 30. " The city of Philadelphia, adorned with a set of eminent practitioners, draws to it a great number of pupils, from the neighbouring parts, to learn the arts of physic and surgery." Indeed the only part in which I have been particular, and there it was unavoidable, is in speaking of the physicians of the hospital, which I have done in terms of the highest respect. p. 31.

It is true, I have endeavoured, as well as I was able, to describe the mischievous effects that ensue from ignorance and presumption, when young men enter upon the practice of Medicine before they are duly instructed in the important duties of the profession. See p. 23. 24.

I have likewise urged the necessity of joining study with practice, and availing ourselves of the medical discoveries and improvements made by others. On the authority of a very learned society, I have also disapproved of the conduct of those, who, from prejudice affecting a simplicity, (which might often mislead them) disdain those persons who divide their time between study and practice. I have likewise added, on the same authority, that novices enlightened by the discoveries, which these practitioners shut their

their eyes against, would in their turn with reason despise them, when grown old in their errors," see p. 42 and 47.

BUT I have no where intentionally aimed the shaft of censure at any one, or attempted the character of a particular man; much less have I dared to attack indiscriminately a whole body of men. As far as I have engaged in painting the errors or faults of any, I have endeavoured to represent general actions of men, such as they are, and not the picture of individuals. Yet, as *Le Sage* has justly remarked, there are some persons who cannot read, and I say there are others who cannot hear, without making an application of those vicious or ridiculous characters which they learn from an author. With him I declare to all who have such a malicious propensity, that they are in the wrong to apply the portraits which they may find here exhibited; nor let any reader take for his own what may equally belong to another, otherwise he will foolishly expose himself, as *Phædrus* says,

“ Stulté nudabit animi conscientiam.”

THE notice I have here given is, I hope, sufficient therefore to exculpate me from the groundless charge of having unjustly reflected upon, or censured the conduct of others,

SOME

SOME, it is said, have thought, that I have described the difficulties of attaining to the knowledge of physic in too strong terms, and have enumerated so many qualifications as requisite to acquire any considerable knowledge of the medical art, that I rather deter students, than encourage them in attempting to compleat their studies and to become skillful in their profession.

To these I reply, that I have been far from exaggerating matters, and have left much unsaid, on purpose to avoid discouraging their eager pursuit. If we cannot arrive at absolute perfection in science, let us not abandon ourselves to a criminal indolence, but strive to approach that degree of knowledge which is attainable by industry, and we cannot fail of being eminently skillful in the healing art and highly useful to mankind.

OTHERS, I am informed, as if they were afraid of engaging in too great an expence, have said that I have insisted too much on the necessity of students attending lectures in every different branch of medicine. They seem to imagine if they hear lectures upon Anatomy only, the branch which I have first mentioned in my discourse, that they can easily make themselves masters of all the other branches of medicine by reading. I blush for those who thus
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expose either their ignorance or their avarice. Why are they not equally contented with such a share of knowledge in anatomy, as they can gain from books, since this science can be better painted to the eye, than some of the other branches of medicine, which are altogether as necessary to be known by a physician? Are not anatomical plates and descriptions as intelligible to a student, as the philosophical studies of chymistry, physiology, and pathology are, from a mere course of reading? or is it of less consequence to gain a systematic knowledge of the *materia medica*, or practice of medicine, than of anatomy, which is of no other use to a physician than as it contributes its share towards explaining what diseases are? The others furnish him with the means and manner of performing the cure, and require, at least, as much labour and explanation as anatomy itself demands.

THE worthy and learned Doctor Lewis is of opinion, “ that the medicinal history, or the knowledge of the powers and effects of medicine in the human body, though apparently a most essential branch of the healing art, has been far more incuriously cultivated, and still perhaps continues less cleared from the errors of former ages than any other science.” Another writer on the same subject says, “ it is an idle supposition to set out upon, that there are the
works

works of good chymists and good naturalists extant; and that from those a sufficient system of information on this important head may be compiled. To compile with judgement requires as much knowledge of the subject as to write well upon it. No man is qualified to execute this to advantage, who is not able to have written what he borrows. Even the best and most authentic books on these subjects have their errors, most of them too many; and while he who is himself deficient in the knowledge of the subject, cannot but be liable to take in these with the rest, it is evident what sort of dependance ought to be placed on his collections."

WHATEVER anatomical skill a man may boast, yet if he is ignorant of the virtues of Medicines, or of their changes from differently compounding them together, or knows not what are the true indications in the cure, or relief of diseases, he may value himself for expertness in dissection, but every sensible man will hold him cheap as a physician.

NOBODY, who is anxious to be skillful in the divine art of healing, will be a niggard of the necessary trouble and expence of rendering himself intelligent in every thing his profession requires he should know. Whoever is sparing of these has no cause of complaint, if he is rewarded only according to his merit, unless
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he would invert scripture and the laws of reason, and casting his eyes on those who have sowed plentifully in knowledge and reaped but little pecuniary advantage from thence, think, from sowing sparingly, he has a better title to expect that his ignorance should be rewarded with a bountiful harvest.



A Synoptic view of the following

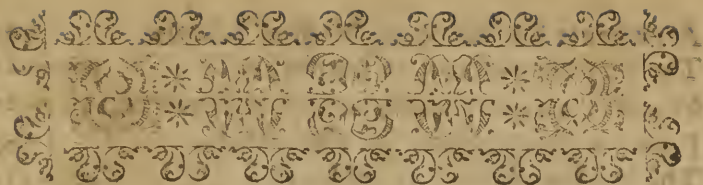
DISCOURSE, to serve as an

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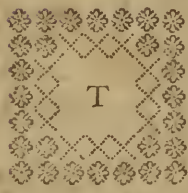
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TO THE
T R U S T E E S
Of the C O L L E G E,
AND THE
C I T I Z E N S
Of P H I L A D E L P H I A.

GENTLEMEN,

 T H E cultivation of Science, and the
progress of arts have justly merited the
regard of every age and country. I
esteem myself happy, therefore, that
I have an opportunity of delivering
my sentiments before so candid and learned an audi-
ence, upon a subject which respects the advance-
ment of the most useful knowledge, and the grow-
ing credit of this institution ;---a subject as import-
ant as can well be imagined to employ our serious
deliberation, or animate our warmest pursuit.

B

WHAT

WHAT I am to propose is a scheme for transplanting *Medical Science* into this seminary, and for the improvement of every branch of the healing art.

It must be confessed that in a knowledge of the supreme *Being*, and of the duties which we owe to him, consists the *sublime* of true philosophy.

THIS is the most interesting pursuit of rational creatures, as it regards the soul and constitutes the highest happiness.

A KNOWLEDGE of the duties which we owe to society, resulting from the relation in which we stand to one another, is an object of the next importance. After this, whatever relates to the welfare of the body deserves our most immediate concern.----Life, when burdened with disease, is but a complication of woes. Health is that choice seasoning which gives a relish to all our enjoyments. As the end of medical science is to restore and preserve health, the welfare of every individual, of whatever age or sex, is concerned in the improvement of it amongst them.

MEDICINE is a science as important in its object, as it is difficult in the acquisition. It is very extensive in its researches, and presupposes the knowledge of many other sciences. The cultivation of it requires

quires no small abilities, and demands of those who engage in the arduous pursuit an enlarged and benevolent mind. But notwithstanding these difficulties, this science must still be productive of very great advantages and honour to a seminary of learning, to a city and to a country; where the wisdom of well concerted laws, and the encouragement given to the promoters of it, are sufficient to procure it an effectual establishment.

A THIRST of knowledge and a spirit of inquiry are natural to man. It merits our endeavours to direct these to worthy objects. Whilst we are anxious to inform ourselves what were the customs of former ages, by what boundaries distant kingdoms are limited, what were the rites and ceremonies of barbarous nations, or what flowers bloom in the remote Indies; ---shall we have no desire of studying what more immediately relates to ourselves? shall we neglect to examine into the divinely curious and amazing structure of our own bodies? are we not concerned in applying our pursuits, to find out the nature of those multiplied calamities to which the human frame is unavoidably exposed, and the means of removing or asswaging those calamities?

To hint at the means whereby we may accomplish the institution of medical schools in this city, and to

point out some of the most considerable advantages it must be attended with, is the task in which I am here to engage. Upon a subject so new in this place, and so pregnant with the most interesting consequences, I flatter myself you will hear candidly what I have to impart; and let the goodness of my intention apologize for any inaccuracies in the execution.

It may be proper, in the first place, to give a general view of the boundaries of medicine, and the different provinces of this extensive science; to show its present condition in America; the difficulties which accompany its study, and the impracticability of making any great progress therein, till it is put on a better footing. These being explained, the means of effecting that end, and the benefits arising from thence will be more easily apprehended.

ACCORDING to the learned Gaubius, "*Medicine is the guardian of life and health, against death and disease.*"* To be more particular. The Art of healing consists in a thorough knowledge of the human œconomy; what constitutes health; what are the diseases, as well internal as external, to which the body is exposed; their seat, causes, and symptoms; and the means of applying with skill, judgment, and address, the various remedies adapted to cure or mitigate them.

FROM

* Gaub. Institut. patholog. Medic.

FROM this view of medicine, we readily perceive its great extent; we learn the principles on which is founded the division of it, into the Study of Physic, more properly speaking, and into Surgery.

THE former is conversant about the cure of inward diseases, and such complaints as require the use of medicines. The latter principally regards external disorders, and those inward maladies which need the manual assistance of a dexterous operator to relieve them. We likewise understand the reason of so many distinct branches of medical study; the previous knowledge of which, both in the Physician and Surgeon, are requisite in order to qualify them for successful practice.

THE necessity of discriminating between physic and surgery will more manifestly appear when we consider, that they are distinct in their nature, and that either of them is an art, sufficient of itself to engage the industry of one man to cultivate.

THE various branches of knowledge which compose the science of medicine, are Anatomy, Materia Medica, Botany, Chymistry, the Theory of medicine, and the practice.

THESE will be fully known by defining them separately; by showing what weight they bear in the
ballance

ballance of healing arts; their relation to each other; and how far the knowledge of them respectively contributes towards the cure of diseases.

ANATOMY, taken in a general sense, consists in knowing the structure of the animal body; considered in particular, it implies a knowledge of the frame and organization of the human body. It teaches of what kind of substance all the parts are composed; it shews their figure, texture, firmness, connection, and relation to each other. From this source we derive our first knowledge of the seat of diseases; of the proper or improper arrangement of parts; of the danger or safety of an operation; and learn the best manner of performing it with dexterity and success; In studying the art of healing we commonly begin with Anatomy, and very justly; for, unacquainted with this, it is impossible to learn the functions of the body in a healthy state, to know of what kind its diseases are, or how to remedy them.

It is Anatomy that guides the doubtful step of the young votary of medicine through an obscure labyrinth, where a variety of minute objects present themselves in such a group as, at first, to perplex his imagination. It is Anatomy which unravels the first difficulties in his pursuit; it lays open to his view the diversity of parts, their combination, disposition,

position, subordination, and movements. These, however intricate they may appear, all concur to establish the most perfect harmony in the human frame, which the attentive inquirer finds from Anatomy, to be created with the most geometrical exactness, according to laws prescribed by unerring wisdom.

IN short, Anatomy is to be esteemed one of the principal pillars, on which we are to raise the superstructure of medical science, as well physic as surgery. Those who would engage in either cannot apply themselves too early, or with too much attention, in order to become skillful anatomists.

CAN any one pretend to stile himself a *Surgeon*, or to perform any operation with safety, if he knows not the structure of the part he is to operate upon? If he is ignorant of the muscles which give it motion, or of the nerves which give it sensation, by cutting through the tendon of a muscle, or by dividing some principal nerve, he may forever deprive the patient of life, or movement in the part. If he knows not the course and distribution of its vessels, he may wound some considerable artery, and from the loss of blood may occasion dangerous accidents. Perhaps speedy death will be the consequence of his rashness.

WITH what propriety can any one arrogate to himself the title of *Physician*, if he is ignorant of Anatomy? how shall he be able to discover the seat of a disease, or what chance has he of being in a condition to remedy it? Nor is a superficial acquaintance with Anatomy sufficient for either Physician or Surgeon. The latter, (that he may not mistake what is natural for a disease, and in attempting to relieve an imaginary evil, bring on a real one;) ought to know the smallest hollow or protuberance of a bone; which serve in many instances to direct him, how far he may operate with safety, as the situation of the nerves and blood vessels are often to be referred to them. It is requisite for a physician to search out every the least particular in the structure of all the internal parts, that he may be in a condition to distinguish the nature of the disorder with which it is affected. As a skillful Pilot informs himself of the least bank of sand or shoal where he is to avoid navigating his ship; so every follower of medical pursuits should be intelligent in the minutiae of Anatomy, if he wishes to practice with ease to himself, and to the benefit of his patient.

THE Materia Medica and Botany may very properly be termed the natural history of medicine, as from these branches of science we derive our knowledge of that part of natural history, which more immediately
relates

relates to the health giving arts. How worthy of a Physician, a Philosopher or a Gentleman, is the knowledge of the different productions of nature taken in its full extent ? I cannot too earnestly recommend this study to young men, to qualify them for every useful profession that is conversant about natural objects, and especially for the study of medicine. But it behoves me to speak more particularly of medical natural history, if I may be allowed to adopt that term in the sense I have already used it ; and first of *Materia Medica*.

MATERIA MEDICA treats of the natural history, and medical virtues, of all those bodies which are employed in diet, or in medicine. It considers the changes they undergo when applied to the human body, either internally or externally ; and the effects they produce on the system.

It is beyond contradiction an object of great importance, to both Physician and Surgeon, to be well acquainted with the *Materia Medica*, as it belongs to this to consider the nature of aliments, the choice of medicines, and a knowledge of their action in the vessels, and how they preserve or restore health.

PHYSIOLOGY, Pathology, Chymistry, the *Materia Medica*, and indeed the several branches of medicine lend a mutual aid to one another, in a greater or less degree.

BOTANY is a knowledge of the natural history of vegetables. It may therefore be considered as part of the *Materia Medica*, as far at least, as it is connected with the knowledge of medicine.

By the Science of Botany we learn to methodize the vegetable part of the creation, and to range vegetables in different classes, subdividing them into a variety of orders, genera, and species. Such a systematic, or botanic arrangement, as it is called, has taught us this general observation, that all plants of the same natural order have in a degree some common virtue. Botany thus lessens the difficulties we must otherwise have been at in discovering their medical virtues. I need not therefore dwell on the importance of this study to a Physician and a Philosopher.

CHEMISTRY is either Philosophic, or Pharmaceutical. The former considers the particular properties of bodies, and explains their effects. It is distinguished from natural philosophy, as this latter is only conversant about the general properties of bodies.

PHARMACEUTIC CHEMISTRY, is that branch of philosophic Chemistry, which regards the particular properties of such bodies as are appropriated to medicine. It considers their virtues in a simple state, or those which they acquire by combination, and

and in this has a close connection with the *Materia Medica*.

THERE are indeed but few substances which are used as Medicines, simply and singly, in their natural state ; but they are commonly compounded by art. As it belongs to Pharmaceutic Chymistry to treat of the separation of the parts of medicinal substances from one another, and of the new properties arising from the composition or resolution of those bodies, it is manifest that this science is of essential use. Whatever skill we may boast in investigating the nature of a disease, or in understanding the structure of the body, yet without a knowledge of the instruments which are to be used, and of their properties and action upon the body, whereby they produce a change from sickness to health, other knowledge avails little in the cure of diseases.

THE THEORY of PHYSIC, more commonly termed Medical Institutions, comprehends under it, the important doctrines of Physiology and Pathology.

PHYSIOLOGY teaches the uses of the several parts in the human body, it treats of all the functions, vital, animal, and natural, in a sound state. The illustrious *Haller* very properly denominates it *animated Anatomy*.

It is the application of natural philosophy to Anatomy, and may very well be defined *A philosophic knowledge of the human body, or a science of all the conditions arising from the structure of its parts.* It has a foundation both in Anatomy and Philosophy.--- Anatomy, in a more limited view, considers the structure of the dead body only; but Physiology teaches the functions of the living body. The distinction will be more easily apprehended from observing, that a person may be a good practical Anatomist, and yet be ignorant of Physiology; but it is impossible to be a good Physiologist, without being an able Anatomist.

THE great stock of literature, as well as genius, which is requisite to become an adept in this science, and the important nature of the subject it treats of, point out its dignity and excellency.

As every disease we labour under is a disorder of the vital, animal, or natural functions; a thorough acquaintance with these in their sound state is implied before we can pretend to understand their morbid affections, or how to remedy them.

PHYSIOLOGY gives us the clearest light in the cure of diseases, which is the grand object of all our inquiries in medicine. The study of it is most entertaining, and engages our closest attention from the many curious subjects with which it abounds.

PATHALOGY

PATHOLOGY treats of the vital, animal, and natural functions in a morbid state, as *Physiology* does in a sound healthful condition. It traces out the seat of diseases, examines their causes and effects, shews their differences, explains their symptoms, and all the different phœnomena, which result from various affections of the system, it prognosticates the event, and indicates the general method of treatment. In short, it forms a system of precepts in the art of healing. It is the immediate guide to practice, and a very capital part of medical knowledge.

THE smallest reflection is sufficient to discover the intimate connection of *Physiology* and *Pathology*, and the subserviency of the former to the latter.

LET no man lay claim to the dignified title of *Physician*, who is not thoroughly conversant in the medical institutions. Without this knowledge, we have no better right to take upon us the cure of diseases, than a blind man to judge of colours, or a deaf man of sounds.

THE PRAXIS, or PRACTICE OF MEDICINE, is immediately conversant about diseases themselves, and treats in the most particular manner of their nature, specific difference, their causes and symptoms, and especially the method of curing them, or alleviating the severity of them when incurable.

THIS

THIS part therefore, as it teaches us the universal application of the precepts derived from a just reasoning and accurate observations made upon diseases, is unquestionably to be accounted the finishing part of Medicine.

As the end of our pursuits is more noble than the means, the importance and dignity of practice are therefore evident; and in as far as the knowledge of the other branches are not considered in subserviency to this, they are merely speculative; though they must be allowed to afford a speculation of a very sublime nature.

MEDICAL Science is one whole, of which all the branches I have enumerated are the several parts. They may be considered as the links of a chain that have a mutual connection with one another. Anatomy, Materia Medica, Botany, Chymistry, and the Institutions, are only the ladder by which we are to mount up to practice. A general knowledge, at least, in each one of them, is useful to both Physician and Surgeon; particularly to the former, who in proportion as he is more intimately acquainted with them all, will become more skillful in the healing science. For, although he confines himself to his proper province of prescribing for diseases, yet ought he to understand the principles of the entire art, and more especially he ought to be very conversant

versant in practice. Seeing the life and health of mankind is the object of medicine, ignorance of the practice is a grand defect in a Physician, and an unpardonable crime, as attended with irreparable injuries.

THE great extent of medical science, which comprehends under it so many different branches, makes it impossible to learn it thoroughly without we follow a certain order. Whilst we neglect this, all our ideas are but crude conceptions, a rope of sand, without any firm connection. Should the student, as chance or whim might direct, sometimes apply himself to one branch, sometimes to another; or read indiscriminately even the best authors on the different parts of Medicine; for want of method, all his knowledge would be superficial; though he might take as much pains as would suffice to make him eminently skillful, had he from the beginning pursued a well concerted plan. What progress could we make in Mathematics, if we did not proceed step by step, and in a certain order?

THE knowledge of the more intricate and hidden truths of science are to be developed by degrees. We can only arrive at them by the assistance of other more obvious truths, which they are connected with, and which lead us to them by a certain chain of facts, observations, and just deductions in a train
of

of strict reasoning. Medical truths rise out of one another, in some measure, like the propositions of Euclid. If we did not understand the demonstration of the first, we should not be able to perceive the proof of the more intricate ones that follow, which can only be explained by means of them, as a certainty of the latter depends upon the evidence of the former. What would require years of study to gain a superficial acquaintance with, if we followed no just plan, may be attained within as few months, by pursuing a regular system; so much does method contribute to facilitate our progress.

THE order which I would recommend in the study of Medicine is to begin with Anatomy; then what I have called medical natural History, viz. The Materia Medica and Botany; Chymistry should follow; the Institutes come next; and the Study of Practice should compleat the work.

THUS I have sketched out a general plan of studying Medicine, which it will be of the highest-consequence for students to observe. It belongs to the teachers of the several branches, to give more minute directions with regard to the particular conduct of each respective one. It will not be improper however to observe here, that young men ought to come well prepared for the study of Medicine, by having their minds enriched with all the aids
they

they can receive from the languages, and the liberal arts. Latin and Greek are very necessary to be known by a Physician. The latter contains the rich original treasures of ancient medical science, and of the first parents of the healing arts. The former contains all the wealth of more modern literature. It is the vehicle of knowledge in which the learned men of every nation in Europe choose to convey their sentiments, and communicate their discoveries to the world. As, it is the best known of the dead languages, it is chosen as the most proper one, by the various nations of Europe, for a medium of intercourse amongst the learned, that is equally attainable by every one of them. Hence it becomes indispensably necessary for a Physician, who is to derive his knowledge from so many different sources, to be well acquainted with Latin.

THE French language has prevailed much in Europe. The advantages which we may reap from the writings of many eminent men, and of many learned societies, which are published in French, make the knowledge of this language very valuable also to a Physician.

AN acquaintance with Mathematics and natural Philosophy we cannot dispense with, since we can go but small lengths in natural or medical inquiries without their assistance. Happy are we to

have all these taught in such perfection in this place. Destitute of that general knowledge which unveils to us the operations of nature, we cannot penetrate into those truths, that form the rules by which we ought to conduct ourselves, in the cure of diseases.

THERE is no art yet known which may not contribute somewhat to the improvement of Medicine; nor is there any one which requires more assistance than that of Physic from every other science. Let young men therefore, who would engage in the pursuit of Medicine or Surgery, make use of all their industry, to possess themselves in good time of these acquisitions. They are necessary to facilitate a progress in the healing arts; they embellish the understanding, and give many peculiar advantages, unattainable without them.

So much being said of the nature of medical knowledge, we are the better prepared to form a judgment on the subject proposed. Let us now take a general view of the state of Physic as hitherto practised in America.

AND here we may congratulate ourselves, that in this, and some of the large neighbouring towns, we have a number of skillful physicians and expert surgeons, qualified by genius, education, and experience, to take charge of the health of their fellow creatures.

creatures. Under these it is the custom of medical students to enter as apprentices, in order to learn their practice, and get an acquaintance with their profession. This it must be allowed is a great advantage; but if we add to it, a casual conversation sometimes with the most able matters whom they can have access to consult, an intercourse with one another, and a reciprocal communication of sentiment and observation, together with reading what authors they can procure on the various subjects of which this science treats; these make the sum total of the best medical education in America. How lame and insufficient it is must appear to all who have the least intelligence in these matters; but will be seen more evidently, I imagine, as we examine it more nearly.

IF, as I before observed, it is necessary that a plan be marked out for directing Students, and that they should be taught a regular course of every distinct branch of Medicine; the infant state of the colonies, and the want of professed teachers, have hitherto clogged medical pursuits in America with innumerable obstacles.

NEVER yet has there offered a coalition of able men, who would undertake to give compleat and regular courses of Lectures on the different branches of Medicine; and such an extensive field it is, as requires the united efforts of several co-operating to-

gether, to cultivate it with success. As well might a parent take upon himself the private tuition of his son, and to make him master of all the different languages, arts, and sciences, which are generally deemed requisite, previous to his entering upon the higher studies of Law, Physic and Divinity; as that a Physician, engaged in an extensive practice, should undertake to deliver to his apprentices, in a regular manner, the precepts of his art in all its branches. This is as impracticable as it is unreasonable to expect. In spite of himself and his inclination to qualify young men in the profession, they must of necessity be left, for the most part, more to their own ingenuity, and precarious application, than a good man could wish. These are difficulties which he would rejoice to have removed; but they are evils which have hitherto been without a remedy. The fatigue, the greatness of expence, and the want of leisure time, which physicians involved in business cannot command, are bars, which those most willing to perfect students cannot get over.

Young men, who are limited to the present opportunities of improvement in America, cannot enter upon the stage of action, but with unfavourable prospect, and they must unavoidably be in continual perplexities. For seldom can we hope to see those who from too great forwardness, or too narrow circumstances, engage untimely in the practice of their profession, ever become more than servile imitators
of

of others. They blindly pursue an uncertain tract, in which they must constantly wander, since it is so often obscured, and insufficient to conduct them any great length.

A contracted view of Medicine naturally confines a man to a very narrow circle, and limits him to a few partial indications in the cure of diseases. He soon gets through his little stock of knowledge; he repeats over and over his round of prescriptions, the same almost in every case; and, although he is continually embarrassed, has the vanity to believe that, from the few maxims which he has adopted, he has within himself all the principles of medical knowledge, and that he has exhausted all the resources of art. This is a notion subversive of all improvement. It flatters the imagination of the indolent, as it dispenses with those toilsome labours which are necessary to the production of truth; and chains him down to a dangerous routine of practice, unworthy the name of art.

THE industry of many centuries have already been employed to bring Physic to that degree of perfection at which it is now arrived. It will still require a long time to remove the obscurities which yet veil many parts of it. The application of many, amongst the greatest of men, has hitherto been insufficient to clear up all our doubts in medicine. How then can it be supposed that any one, untutored in this art, can by his own natural abilities ever reach

reach the bounds of what is already known in it ? The great multiplicity of diseases, which beset the human race, present us with a field too vast and unknown for individuals to cultivate by themselves. Their causes are frequently so latent, and the usual resources of art so often fail the most skillful, as to compel them to seek out new paths in which they may proceed.

FOR a man of the most finished genius to enter upon practice, having only that stock of knowledge with which his own observation and experience could supply him, unenlightened by those discoveries which others have made, would be an act of presumption. Had this been sufficient to conduct us to the summit of our art, it would have been in a state of perfection many ages ago.

OBSERVATION and physical experiments should blend their light to dissipate obscurity from medicine. This is the more needful, as nature commonly offers herself to our notice under a cloud, and requires that we should follow her steps with scrupulous attention, watch all her motions, and trace her through every meander she makes, in order to discern clearly the tract she keeps in. * “ In a course of observation, “ the mind is but a mere spectator, and only sees “ external appearances. We must aid these with the “ light of Philosophy to unveil knowledge fully. We “ must dive into the bottom of things by repeated
and

* Vid. Preface to the memoirs of the royal Academy of Surgery at Paris.

“ and different experiments, and, as it were, force
 “ nature to yield herself up to our inquiries.”

To accomplish this demands the brightest talents, a liberal education and great experience. We cannot suppose then that a Student of ordinary parts can, by any means of himself, acquire sufficient skill in medicine to take charge properly of the lives of mankind.

THE almost infinite number of objects, to which he ought to be no stranger, pass before him so very slowly, that the longest life would offer to his contemplation but a very inconsiderable share of those, with which he may be made acquainted, in the several branches of his profession, by the instruction of able masters. Shall a novice then hope, merely by his own abilities, to raise a superstructure comparable to that already built up to his hands, which has exhausted the ingenuity and invention, and employed the industry of some thousand years? Where will the most extensive practice be sufficient; and how comparatively little will the most enlarged faculties contribute, to furnish him with a ten thousandth part of the materials?

SHOULD we for a moment turn our eyes upon the man, who dares to enter upon the practice of Physic, without being properly initiated in the science, or instructed in the important duties of the profession, he would soon present us with a melancholy prospect: If not past all feelings of humanity, what compunctions of conscience, what remorse would not fill his

breast from practising at random and in the dark; not knowing whether his prescription might prove a wholesome remedy, or a destructive poison. To discover the nature of an uncommon disease, or to account for an unusual symptom, puzzles his invention. --- Ignorant of every true principle, from which, by a just reasoning, he might be able to deduce practical inferences, he knows not what prognostic to make, or what plan of treatment to observe.----Unsteady and irresolute, he attempts a variety of means; such as either avail not, or such as heighten the danger of the disease, already too violent.----He may thus interrupt the salutary attempts of nature, or, not knowing how to second them, tamper with the life of his patient, and idly waiting to see what nature herself is capable of doing, neglect to succour her, till it is too late, and the fatal hand of death is just closing the gloomy scene.----Wretched is the case of those whom chance, or misinformed judgment, shall throw into his hands, to fall victims of his temerity.----Great is the havoc which his ignorance spreads on every side, robbing the affectionate husband of his darling spouse, or rendering the tender wife a helpless widow;----increasing the number of orphans;----mercilessly depriving them of their parent's support;----bereaving the afflicted parents of their only comfort and hope, by the untimely death of their beloved infants, and laying whole families desolate. Remorseless foe to mankind! actuated by more than savage cruelty! hold, hold thy exterminating hand.---

Glad

GLAD should I be to moderate this too exact description of the effects of ignorant and presumptuous practice ; but what judgment can we pass on those, who have been scarcely instructed in the first elements of medical science, and yet force themselves into practice, as if they meant to sport themselves with human life, and human calamities?

A VERY judicious person † has remarked, that Medicine is the science concerning which people in common take upon them to reason most, without having the least notion.----- Who, that has not made Mathematics his study, will presume to argue upon any of the difficult calculations of Algebra? But when medical subjects are the topic, doubtless we are masters of them without study. It must be confessed indeed, if we know much about medicine without being educated in it, that our ideas of it are truly innate.

ABSTRACT truth is at all times but a simple undivided object, yet has ten thousand counterfeits to impose upon the unwary. No wonder that the impatient ardor of youth, who cannot brook delay, or always take the necessary time to distinguish truth from falsehood, aspiring to reach the top of science by a rapid flight, hurries them on in a too unguarded manner, when left to themselves, and thus

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precipitates

† Mons. Sée, professor of Anatomy.

precipitates them into the grossest errors. In medicine, as in other sciences, if they do not set out on sound principles, they pass on from error to error and multiply mistakes, unable to divest themselves of their first prejudices, which, being confirmed by habit, become a second nature.

Easy it is to fall into errors, hard to recover ourselves from them.

Facilis descensus Averni:
sed revocare gradum, hoc opus, hic labor est. †

WITH greater ease we may sow just principles in the beginning, than clear away the rank weeds of popular prejudices, after having had time to take deep root, and fix themselves firmly in the minds of students.

LET us now turn our views to the growing state of this and the neighbouring colonies ; let us reflect on the great number of inhabitants scattered through such an extensive tract of country, who are destitute of all the aids of medical science. Let us consider further, that in many large towns and villages, there are a number of persons entrusted with the practice of medicine and surgery, who, being destitute of all means of acquiring the true principles of their profession, remain in a pitiful state of ignorance in it, without any prospect or opportunity of correcting their errors, or greatly improving their knowledge.

† Virgil: *Æn.* vi

knowledge. We cannot then remain untouched with sentiments of compassion; we cannot avoid feeling part of their distress, or forbear to wish that a remedy were found for so great a misfortune.

NOR is this so desirable an object quite beyond our reach. The institution of schools for teaching the several branches of the healing arts must have a very great tendency to effect our wishes. To the full accomplishment of these nothing can contribute more powerfully, than the resolution the trustees of this seminary have taken, to countenance this scheme which I have had the honour of proposing; and their encouragement of such persons as, upon due information, they shall find qualified to take upon them the important offices of professors, in the various branches of Medicine.

ALTHOUGH we may not be in a condition to enter upon every part of this great undertaking immediately, yet we may lay a foundation, which cannot fail of being built upon shortly by those who follow us. Time will perfect what is properly begun. What indeed is all science, but the accumulated observations and discoveries of a succession of many people, framed into a system? When this is once accomplished, every individual may then avail himself of the labours of others, and

thus arrive, in a compendious manner, at a competent knowledge of any art. This is happy for us, seeing life is short, and the human mind necessarily occupied with a great number of pursuits, very different from our particular professions, which would not allow us otherwise to go any great lengths.

FROM the union of ingenious men the arts find resources, never to be met with in the labours of individuals, with whom the most useful truths are frequently buried ; whilst societies form a kind of magazine, which collects together all the knowledge of the learned, and consecrates it to public utility. It establishes a commerce for the community, which never perishes, but from age to age is a fruitful source of new acquisitions. † What rapid progress have we not sometimes seen in science from a conspiracy of counsel and industry ? Thus institutions, which have appeared inconsiderable at first, improve fast, and make hasty strides towards importance and grandure. This very Seminary, of late only a collection of private schools, although of so short a standing, has increased its reputation and usefulness, so far as to attract the notice of our mother country ; and already begins to flourish, beyond what could reasonably be expected in so short a time.

OF what consequence the united efforts of men learned in their profession are, the medical colleges
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† Preface to memoirs of Royal Acad. of Surgery.

of Edinburgh afford a remarkable instance. Within the space of little more than forty years, the present professorships in Medicine were first formed. A few gentlemen from Scotland, then prosecuting their medical studies at Leyden, concerted a plan, and undertook, themselves, the important charge of instituting schools for teaching the various branches of Medicine. They met with countenance and support from the patrons of the university, and by the great abilities, assiduity, and experience of those gentlemen, and some few of their successors, the reputation of that place is raised to such a height, that, to their immortal honour, it already rivals, if not surpasses that of every other school of Physic in Europe. The names of Drummond, Dick, Clerk, Rutherford, Sinclair, Alston, Plummer, Monroe, Whytt, Cullen, Hope, Black, and some others, are now known wherever the knowledge of Physic is cultivated; and they are revered at home as parents and guardians of the healing arts. There is a great resort of medical students at the university of Edinburgh, as well from Great-Britain, Ireland, and the West-Indies, as from the Continents of Europe and America. These bring to the university and city considerable advantages, and, in return, carry the fame of their learning and their professors to every quarter of the globe. Were it necessary I could easily enumerate many familiar instances of the improvement

improvement of science ; but these, I imagine, will suffice for the present.

WHY should we be deterred from establishing like institutions of Medicine in this seminary, especially as so many circumstances conspire to invite and encourage so important an undertaking. I shall briefly enumerate the most interesting of them.

THE city of Philadelphia, adorned with a set of eminent practitioners, draws to it a great number of pupils, from the neighbouring parts, to learn the arts of Physic and Surgery. We may reasonably expect, that from the proposed institution, the number of students, who shall resort hither to partake of these advantages, will be gradually augmented.

BESIDES men of great abilities and eminence, under whom they may see private practice, the hospital of this city is a great persuasive to determine a concourse of medical students to this place. It would be doubly useful to them, and increase their motive of repairing here, if they could be first properly initiated in the principles of their profession, by regular courses of lectures duly delivered.

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THIS noble charity, maintained by the donations of the benevolent at no small expence, supports a great number of sick of both sexes. As there are six physicians of the most unquestionable skill, integrity, and character, who, moved by the tender principles of humanity, have taken upon them the charge of attending the sick gratuitously ; pupils here meet with such a number of cases, both chronic and acute, treated so judiciously, and so agreeable to the rules of art, as cannot fail very much to facilitate the knowledge of their profession.

It is a most favourable circumstance to the undertaking which I have suggested, that of these six physicians, no less than five of them are trustees of this college. We may from hence, I think, safely infer, that every thing in their power may be hoped for, to second the medical institutions of the college, by uniting with them the advantages of the hospital, and thus rendering the education of youth in the healing arts as compleat as possible in this city ; to which nothing can contribute more than a course of clinical practice and clinical lectures, by physicians of knowledge and experience. *

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* Besides those who are apprentices to, or under the immediate tuition of the hospital physicians, every student of Medicine in town is admitted to see their common practice in the hospital, upon paying a certain sum annually during his attendance there. It were to be wished that some of those gentlemen, so skillful and experienced in the healing arts, enriched with useful observations, which only time, and an extensive practice can furnish, would undertake to give

THE flourishing state of literature in this college, and the perfection in which the languages, mathematics, and polite arts are taught here, are strong inducements for such young men as propose engaging in the study of Medicine, to enter the college. Because when medical lectures are given under the patronage of the trustees and faculty, at the same time that students are prosecuting other parts of learning, they will have greater advantages there than hitherto they have enjoyed. Thus the motives of repairing to Philadelphia for the study of Medicine and Surgery will multiply in proportion.

THIS city, so large, in such a thriving state, and so extremely beautiful and pleasant in its situation, as well as so nearly central to all the colonies on the continent, has peculiar advantages in respect to the resort of students ; which added to the advantage of the

a course of clinical lectures, in order to explain the hospital practice; the students paying such reasonable fees to those clinical teachers as may be thought adequate to their trouble. This is a step of the greatest and most obvious utility to both hospital and student, consonant to reason and the usage of some of the best hospitals in Europe.

From my personal acquaintance with many of the managers when I attended the hospital some years ago, I am persuaded they would readily encourage this plan. Their known benevolence and ardent desire of contributing all in their power towards the improvement of medical arts, as well as relief of the sick ; and thus uniting two of the most valuable purposes of such a foundation, lead me to think so.

When two such important institutions, as a medical college and a well regulated hospital, contribute mutually to the advantage of each other, all ranks and conditions of people would no doubt most cheerfully unite in support of a common interest, so beneficial to useful literature, and so advantageous to the province in general.

the college, hospital, and the different courses of lectures, could not fail of bringing a concourse of strangers to this place.

THE establishment of a medical library in this college would prove another great benefit to students, and tend likewise to influence their resort hither. Proper means may possibly be suggested to accomplish this, without any great additional charge to the college. The pupils that attend lectures, for whose advantage it is intended, may, upon being matriculated, afford each of them to contribute annually a small sum. This from a number of pupils, in a succession of some years, would be of considerable service towards procuring a medical library. Perhaps the physicians of Philadelphia, touched with generous sentiments of regard for the rising generation, and the manifest advantages accruing to the college thereby, would spare some useful books, or contribute somewhat as a foundation on which we might begin.

THE growth of this and the neighbouring colonies calls aloud for a medical institution. The increasing number of inhabitants demands an increase of those who exercise the profession of Medicine and Surgery, and ought to be an argument with all of us, who regard either the present or future advantages of the country, to attend seriously to the importance of the subject.

THE scheme of establishing medical lectures, which I now subject with all deference to your consideration, has been communicated to some very competent and unbiassed judges in England, who not only deem it practicable, but a laudable and useful enterprize. The great and well known Dr. Fothergill, the justly celebrated Dr. Hunter, and the learned Dr. Watson, men distinguished for their superior knowledge in literature, and particularly eminent in every thing which relates to medical science, have esteemed the improvement of such knowledge amongst us worthy of notice, and the institution of lectures in every branch of Medicine as deserving the patronage of all who wish well to arts and sciences. It would therefore argue great inattention in us to neglect the first opportunity that offers, of giving effect and stability to the design. Nor can we defer the execution of it at this time, without risking the loss of the noble prospect which it affords, not easily to be retrieved.

It is with the highest satisfaction I am informed from Dr. Shippen, junior, that in an address to the public as introductory to his first anatomical course, he proposed some hints of a plan for giving medical lectures amongst us. But I do not learn that he recommended at all a collegiate undertaking of this kind. What led me to it was the obvious utility

utility that would attend it, and the desire I had of presenting, as a tribute of gratitude to my alma mater, a full and enlarged plan for the institution of Medicine, in all its branches, in this seminary where I had part of my education, being amongst the first sons who shared in its public honours. I was further induced to it from a consideration, that private schemes of propagating knowledge are instable in their nature, and that the cultivation of useful learning can only be effectually promoted under those who are patrons of science, and under the authority and direction of men incorporated for the improvement of literature.

SHOULD the trustees of the college think proper to found a professorship in Anatomy, Dr. Shippen having been concerned already in teaching that branch of medical science is a circumstance favourable to our wishes. Few here can be ignorant of the great opportunities he has had abroad of qualifying himself in Anatomy, and that he has already given three courses thereof in this city, and designs to enter upon a fourth course next Winter.

I PROPOSE in a few months to employ myself in giving a course of lectures on the Materia Medica, in which the pharmaceutic treatment of medicines, as well as their virtues, will be described, and the

doctrines of the chymical properties of bodies will be considered, as far as is useful to give a general idea of Chymistry, and as is consistent with a course of the *Materia Medica*. Next year I design to attempt a course of lectures upon the Institutes or Theory of Medicine, which will be illustrated with practical observations. Possibly in a few years more, persons duly qualified may offer to undertake full and compleat courses of every branch of medicine; and a plan may be adopted; conformable to that which is followed in the, so justly celebrated, school of physic at Edinburgh.

THE regular distribution of literary honours upon the deserving is a step, which is neglected in no institution that promises fair to be extensively useful. As it is sometimes prejudicial to attempt a scheme entirely out of our reach, so, on the other hand, a too contracted plan often mars the work altogether, or frustrates the great utility which might be derived from a more finished model. Let us aim then to distinguish worth with adequate rewards, and confer due honours on real merit. This will, render the institution compleat, and give all possible encouragement to pupils.

As you have hitherto been so careful not to prostitute the honours of this seminary on any occasion
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by conferring them on the undeserving; and have made degrees in arts not an unmeaning title, but an honourable badge of distinction, you have given solid reputation to those who have been educated here. You have thus conducted them with ecclat to the study of the learned professions, or ushered them into other useful spheres of life with lustre and advantage. The same regard being had to the higher degrees of literature would increase these good effects. In a short time, every person would be ashamed to think of practising physic, who had not industriously cultivated the best opportunities of instruction. He would otherwise be marked out by every intelligent man, as one who had never been properly initiated in his profession, and, consequently, as unequal to the task which he had presumptuously engaged in.

If the several parts of the design, which I have pointed out as practicable to execute, meet with that attention which they seem to merit, it is not to be doubted that, in a short time, medicine will put on the form of a regular science, and be successfully cultivated in the College. And supposing we are not able to meet with gentlemen already in circumstances to engage in every part of the work, we may however hope that a laudable ambition, sentiments of honour, and the interest of the public weal will prompt some of the rising students, among

among ourselves, of more than ordinary talents, to cultivate with the utmost application the particular branches of medicine, to which they find their genius more especially point. It is to be hoped that they will avail themselves of every opportunity of improvement by going abroad, and on their return, transplant hither, to the great emolument of the community, every different branch of knowledge relative to their profession. Is it not probable that such a plan as this laid before them will open the views, spur on the ambition, and allure the industry of students, so that we may hope to see, in some years, a number of gentlemen, natives of America, qualified to fill the most difficult and important parts of their profession, with usefulness and applause?

It may perhaps be objected, that the colonies are yet in so infant a state that any attempt to establish medical schools is premature. It may be imagined, that it will prevent many from going abroad, to obtain a more compleat education. Let it be considered, that every one, whose circumstances allow of this, will have a plan before them, and every incitement to render their education as perfect as possible. Many who are not in a condition to support the expence of being educated abroad, by being instructed here in the first elements of their profession, and informed what further remains to be done, have it in their power to finish their studies abroad afterwards

afterwards with advantage. This class perhaps includes the greatest part of medical students.

THE saving of money may be thought more necessary at this juncture, when the check which our commerce has received makes it so scarce amongst us.

SOME there are indeed, and not a few, who cannot by any means afford the expence of crossing the Atlantic, to prosecute their studies abroad. The proposed institution will therefore prove highly beneficial to every class of students in Medicine.

THERE is a difficulty indeed in the way of the undertaking of great weight, which it were to be wished could be surmounted; I mean in case all the different branches of medicine should be blended in the practice of any professor. This evil would call aloud for a remedy. The love of humanity prompts every ingenious man, engaged in that part of medical pursuits which he likes best, to prosecute it with assiduity and constancy. The bounds of life are the only limits to his industry. He devotes himself entirely to a toilsome study, but which ceases to appear so to him, when the interests of humanity are the fruits of his labours. There are men so intent upon improving favourite studies, that a labour of very many years is but a constant exercise of the eyes and hands, by which the science in general is greatly enriched.

enriched, whilst they themselves remain in a shameful indigence and obscurity, neglected by those to whom their labours prove so beneficial. †

WHILST Medicine from the greatness of its object, the preservation of the species, is one of the most useful subjects of knowledge to a state, and at the same time one of the most extensive and difficult; we must regret that the very different employment of a Physician, Surgeon, and Apothecary, should be promiscuously followed by any one man, however great his abilities. They certainly require very different talents. The infant state of a place, is sometimes used as an argument, not in support, but as an apology for such measures. The longer we follow any faulty custom, the more difficult we find the task to break through the shackles of it, even when it enslaves us to our greatest detriment.

EVERY mechanic art, and almost every employment in life, serve as instructive lessons to the practitioners of Medicine. The construction of a watch, the building of a house, nay the making of a pin, are striking examples of the truth of this assertion. In each of them a number of different artists are employed, who confining themselves every one to his own branch of business, the whole work is more quickly finished, and more highly improved. The length to which human skill may arrive, when thus pro-

† Memoirs of the Royal Academy of Surgery.

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perly directed is amazing. Why then should we continue to follow such a variety of different occupations as are generally crouded together in the practice of the healing art? The mutual interest of patient and practitioner seem to require a different procedure. The chief argument alledged for it, viz. that it is less expensive, is altogether fallacious, and, unless I am much out in my conjectures, it will be found a very difficult task to prove the assertion. But granting it to be truly so, yet when life is the object at stake, a notion of cheapening health, and a disparagement of the practitioners skill, argue a fordid mind, and will, in the end, always discover a most mistaken plan of œconomy.

If Physic, Surgery, and Pharmacy were in different hands, practitioners would then enjoy much more satisfaction in practice. They would commonly be less burdened with an over hurry of business, and have an opportunity of studying the cases of the sick at more leisure. Would not this tend to the more speedy relief of diseases and the perfection of medical science, as every Physician would have more time by study, observation, and experience united, to cultivate that knowledge which is the only foundation of practice? “ This knowledge, sought out by Philosophy, drawn from nature and the operation of Medicines, and founded upon the causes of our complaints, upon observations of their signs and upon the laws of the animal œconomy, form

the true Theory, without which, there is neither art nor method in the treatment of diseases. But how great is the force of prejudice, that practitioners, who affect a seducing kind of simplicity, should look upon those persons with disdain, who divide their application between study and practice; they inspire a contempt for Theory, whereby they impose on the public who are no judges of its usefulness. Thus the most gross ignorance finds, in credulity, a too sure means of decrying that knowledge which can alone direct our steps with certainty. Ought we then to endeavour to render the art compleat, by attending only to the progress of that experience which is acquired by practice, which frequently begets so much vanity and seduces the vulgar?" * Let us rather commend those who would be afraid of making no further advance in the healing arts, if they were compelled to abandon study and to give themselves up wholly to practice; and who examine themselves every year, to know what progress they have made in the knowledge of diseases. The great BOERHAAVE, whose example

* Mais telle est la force de Préjugés : Ces Praticiens, dis-je, qui se parent d'une simplicité séduisante, regardent avec dédain ceux qui partagent leur application entre l'étude et la pratique ; ils inspirent du mépris pour la théorie, et en imposent au public, qui n'en sauroit connoître l'utilité. C'est ainsi que l'ignorance la plus grossière trouve dans la crédulité un moyen toujours trop sur pour flétrir le savoir, qui peut seul assurer nos pas.

Doit on en attendre les progrès de cette expérience qui s'acquiert par la seule pratique, qui inspire si souvent tant de vanité et qui séduit le vulgaire ? &c. &c.

Vid. mem. de l'Acad : royal : de Chirurg : de Paris.

example is worthy of imitation, laid it down to himself, as an inviolable law, to divide his time between study and practice.

WHERE abilities and the love of a profession unite, there is the surest presage of success. But unhappy is the Physician, who has a soul turned to philosophical inquiries, who loves to search into the causes, and investigate the phenomena of diseases; and yet is at the same time diverted from these useful researches, by other occupations to which he has an aversion. How disagreeable! how cruel a case is it to be forced, in compliance with custom, to stifle the tender feelings of humanity; to take the knife into his unsteady hand; and in spite of reluctant nature within him, to be obliged to perform some painful and tedious operation on the suffering patient! better consigned to one whose inclination, experience, and address, qualify him for the irksome, but needful task!

ON the other hand, a spirit of intrepidity and a particular turn of mind carry many beyond the horrors which get the better of others. Fired at the same time with a like love of humanity, and filled with desires of relieving the calamities to which external violence, and innumerable accidents both from within and from without subject our lot, they apply themselves with the most laudable zeal and assiduity, to improve that essential

part of the healing art which is capable of giving effectual aid by the painful, but wholesome severity of manual operation.

To render any person dextrous in the operations of Surgery, however intrepid he may naturally be, it is necessary that he should practise them often, and devote himself to them. This is inconsistent with the occupation of a Physician involved in a multiplicity of business, and requiring leisure to study the cases of his patients, who linger under a complication of evils widely different.

It is to lovers of humanity like these, so differently occupied, that some owe the movement of their limbs, others the mitigation of obstinate diseases, and others the prolongation and pleasure of their lives.

THE business of Pharmacy is entirely different from either. Free from the cares of both, the Apothecary is to prepare and compound medicines as the Physician shall direct. Altogether engaged in this, by length of time he attains to that nicety of skill therein, which he never could have arrived at, were his attention distracted by a great variety of other subjects.

THE wisdom of ages approved by experience, the most certain test of knowledge, has taught us the necessity and utility of appointing different persons for these so different employments, and accordingly, we find them prosecuted separately in every wise and polished

polished country, to the great advantage of each, and to the unspeakable emolument of the community. Indeed the benefits which these preservers of the human race, improving each his profession apart, have shed abroad in the world, somewhat resemble the great blessings of nature, the light and air ; they are so common we all enjoy them, and, for the most part, without appearing sensible of their unspeakable value.

I appeal to the common sense of mankind. The common sense of mankind, duly informed, gives its verdict against a promiscuous profession of different occupations. When a country has made some advances in other arts, and begins to flourish in knowledge, perhaps not without some luxury, it is high time that medical science should be practised with regularity. It would be unpardonable in the professors to let it remain at a stand, as if they had already attained the summit of human wisdom. This would curb every laudable attempt to improve polite literature amongst the rising generation. In general, languid is the prosecution of study, when there is but little prospect of seeing our labour crowned with success.

LET us now consider in a brief manner the advantages we may hope for from the execution of our design. These are greater, and more in number, than strike our notice at once. We shall first consider

sider the benefits which the STUDENTS of MEDICINE will derive from it.

IN a place so remote as Philadelphia from every school of Physic, we cannot expect a very early intelligence of all the medical discoveries and improvements which are made in Europe. In establishing medical colleges, the professors of each branch will find it incumbent on them to keep up a correspondence with the learned abroad. They will thus get speedy accounts of every thing new which may relate to their particular provinces. By improving this knowledge, they can diffuse it amongst their pupils, and, by their means, more readily propagate it through every part of the country.

THAT this will be of the greatest utility is manifest, if we rely on the authority of the most celebrated academicians. They strongly recommend “ to let none of those discoveries escape us, which are daily brought to light by the labours of masters in the art. Without this care, say they, the most consummate practitioner, within the space of twenty years, will be ignorant of those truths which are then familiar to novices : the labours of others will thus become a source of labours to himself, and, without new study, his knowledge will decay into ignorance. Thus the celebrated practitioners in the time of Harvey, content with the knowledge which they had acquired
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from their predecessors, shut their eyes against the light which this great man presented to them. They had made a long career in the exercise of their art, without knowing the circulation of the blood, which exposed so many errors in the books of the ancients, and so many false steps in their proceedings; whilst Novices, enlightened by this discovery, with reason despised these haughty practitioners who grew old in their errors." *

STUDENTS are apt to be disgusted with any art, when, at their first entrance upon it, they find it beset with difficulties which to them appear unsurmountable; but when these begin to clear up, their eager pursuit of knowledge increases daily with growing pleasure. A regular course of instruction prompts them to an eager pursuit of learning: it sheds forth conviction upon the mind, and improves the confidence of the diligent; a confidence founded on

* Il faudroit encore ne laisser échapper aucune des decouvertes qui naissent tous les jours des travaux des maîtres de l'art: sans cette étude, le Praticien le plus consommé ignorera dans l'espace de vingt années des verités qui seront familières à des novices: les travaux des autres sont donc une source de travaux pour lui; et sans une nouvelle étude, son savoir même seroit flétri par son ignorance.

Tels étoient des Praticiens célèbres contemporains d'Harvée. Contens des connoissances qu'ils avoient puisées dans les Ecrits de leurs predecessors, ils fermerent les yeux à la lumière que leur presentoit ce grand homme; ils parcoururent une longue carrière dans l'exercice de leur art, sans connoître la circulation du sang, qui devoile tant d'erreurs dans les livres des anciens, et tant de faux pas dans leur marche. Des Novices, éclairés par cette decouverte, meprisoient avec raison ces praticiens dédaigneux qui vieillissoient dans leurs erreurs.

Vid mem. de l'Acad: royal: de Chirurg: de Paris.

on the just principles of demonstration and reason. It is very certain that oral instructions and ocular illustrations render science easier, are more convincing, and make a more durable impression than the best wrote treatises.

A course of reading and observation is not sufficient, without other instruction, to qualify young men for practice; since many of the books of medicine are full of obscurity, or crowded with absurdities, which puzzle the unexperienced reader, and often lead young minds astray.

As the most precious metals in a state of ore are mixed with dross, so the choice truths of Medicine are frequently blended with a heap of rubbish. How valuable and necessary is an experienced professor who knows how to clear this away; to present those truths simple and pure from mixture; to trace them out under the various appearances they put on at different times, and to discover to students the clue of reasoning which they ought to pursue, in winding through a labyrinth of obscurity, before they can arrive at a clear knowledge of the more difficult parts of their profession! That is to teach them how to philosophize justly in medicine.

THE greatest genius left to itself is like the earth, when destitute of the sun, incapable of bringing its productions to a perfect maturity. A course of regular

gular instruction is to the mind like the rays of light darting through the obscurity of Chaos. It dispells the clouds that envelope the understanding, and enables the diligent student to penetrate into the secret recesses of nature. Thus prepared, he is in a situation to enrich himself with those treasures of knowledge which the observers of nature have heaped together for many ages. He has a torch put into his hand to light him to the true science of curing diseases.

As the practice of teaching is requisite, in order to be able to explain the difficulties of any science, and render the communication of its precepts familiar to others, it is necessary that persons should devote their time very much to it. This can only be done to good purpose, so that students may reap ample advantages therefrom, by means of instituting public professorships.

THE business of a Professor is to place before students in a full light, at their first entrance upon any study, the true object of that study, and to ascertain their proper pursuit. In performing this, he first explains to them the terms of art, and renders the language and ideas thereof familiar. He afterwards directs them to what is the most proper course of study, and to the best authors to be consulted on the subjects of which he treats. He points out the mistakes which any of them may have run into, and puts them upon

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their guard against such errors as are apt to mislead students. He supplies the defects of those authors, and mentions what new light the latest disquisitions and discoveries have thrown upon every subject. He thus points out the road which leads to science, and prevents the young votary from running into a maze of doubts. He confirms his steps, smoothes the rugged path he has to tread, assists him in climbing the steep ascent, and, before dismissal, informs him how he is to conduct himself, in order to reach at length to the summit of his profession. Having a plan before him, a fixed end in view, and the means of attaining it within his reach, the student, impelled on with irresistible ardor, presses forward, eager to reach the goal of knowledge and the height of all medical attainments ; and since he is so well instructed in his career, has the apparent prospect of wished for success.

ANOTHER manifest advantage of public lectures is, that they bring together a number of students of the same class of knowledge. If the professor is a man who labours to improve the growing mind, he has it in his power to kindle an ambition in the breast of his pupils. An opportunity is put into his hands of examining the progress they make. They become acquainted, and sometimes form societies under the eye and direction of their teachers and masters. They converse, and write discourses

on such literary and medical debates as tend greatly to their mutual improvement.

As to what regards students themselves, these several particulars I am persuaded are sufficient to convince every judicious person of the necessity of instituting, in this seminary, professorships in all the branches of the healing arts.

THE great advantage which may be expected to accrue to the SEMINARY itself, from the establishment of medical schools, is the advancement of the grand design of such a seminary in general, and the improvement of some of the most useful branches of literature, that can embellish any seat of learning. If wisdom and profitable science are the glory, the ornament, the highest attainment of humane nature, and give the strongest evidence of a people being enriched with generous and refined sentiments, by which all polished nations are ambitious of being distinguished; then, most certainly, it becomes an object of the first consideration with us to determine, whether the cultivation and patronage of this science are worthy our most ardent pursuits, and whether we shall improve this opportunity which is now put into our hands for that purpose. It is needless to inform you of what consequence it is to take the lead in a design so interesting, so noble and important.

THE reputation of every sort of useful learning must be of great benefit to a CITY, as it will draw, from all parts, persons that have a relish for literature, who will always prefer a place of education, in which the greatest number of advantages coincide.

THE resort of strangers to any city for the cultivation of science must give it proportionably a pre-eminence over others. An education in any place begets that place an interest, and as it were naturalizes strangers to it. In return for a dispensation of knowledge, it collects a tribute of riches as well as of affection from all quarters.

AMONGST the benefits to be derived to the PROVINCE from the establishment of medical schools, I cannot pass over a particular one, which ought to fire the ambition, and animate the industry of every student who has chosen to devote himself to the cultivation of the healing arts.

WE live on a wide extended continent of which but the smallest portion, even of the inhabited part, has yet been explored. The woods, the mountains, the rivers and bowels of the earth afford ample scope for the researches of the ingenious. In this respect an American student has some considerable advantages over those of Europe, viz. The most ample field lies before us for the improvement of natural history. The countries of Europe have been repeatedly traversed
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by numerous persons of the highest genius and learning, intent upon making the strictest search into every thing which those countries afford; whence there is less hopes or chance for the students who come after them to make new discoveries. This part of the world may be looked upon as offering the richest mines of natural knowledge yet unrifled, sufficient to gratify the laudable thirst of glory in young inquirers into nature. The discovery must greatly enrich medical science, and perpetuate the glory of the authors to latest time.

How many plants are there, natives of this soil, possessed of peculiar virtues? how many fossils to enrich the cabinets of the curious? how many natural substances, objects of new trade and commerce to supply materials for various arts, as well as to enlarge the bounds of Medicince? what means are so likely to bring them to our knowledge as medical researches and careful experiments, prosecuted by those instructed how to make them, and how to profit themselves of the discovery? A spirit of inquiry into these things would be put on foot as the natural tendency of such an institution, and prove the most likely means of bringing to light the knowledge of many useful things, of which we yet remain ignorant, the more readily, as natural history is one of the most essential studies to prepare a person for

for prosecuting medicine with success, and one of the most distinguished ornaments of a physician and man of letters.

FROM all these different views, I presume none will deny the expediency, and necessity if I may so say, as well as the exceeding great benefits of the proposed institution to this seminary, city and province. Nor does the utility of it stop here. We may not only hope to profit ourselves, but, in very many instances, contribute hereby to the advantage of the COLONIES, the vicinity and connections of which with ours might encourage many students to resort hither. Thus the reputation and influence of this institution, becoming at length more universal, might extend themselves as from a center, and include distant places within the circle of its usefulness.

FOR a few moments, suffer me here to bespeak the attention of

THE STUDENTS OF MEDICINE.

HAVING now laid before you an object worthy of your most earnest regard ; the nature of the studies in which you are to engage ; their extent, difficulty, importance and dignity being now pointed out, and a plan suggested to you, whereby your labours may meet

meet with a more certain success ; consider well, Gentlemen, how much depends upon your own diligence-----Think how necessary it is to employ all your attention in order to accomplish so valuable an end.-----To this end place before your eyes the illustrious examples of great men, who, by pushing their researches into the bosom of nature, have extended the bounds of useful science. Tread in their steps, become indefatigable in the cultivation of medical literature, and be earnest to bring it to perfection. The rewards of the rich, the countenance of the great, and the justly merited esteem of the good and the virtuous, which outlasts the fleeting years of humane date, will not be wanting for your encouragement. You will be in a condition to practise the healing arts with skill and reputation, and to transmit your knowledge, and the benefits thereof, to a succession of others. What is a most pleasing reflection, those who have been distressed by irksome diseases, and relieved by your skill, will own themselves indebted to you for the life you have prolonged ;----You will be ever remembered as the ornament and boast of your profession, and be justly stiled guardians of the health of mankind.

THESE considerations ought to animate you in the noble pursuit, and determine you to persevere therein with unshaken firmness and constancy. Be
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not dispirited at the difficulties which present, or the obstacles you are to encounter. Let them serve rather as a spur to your industry. They will not stand in the way of men who are determined to surmount all opposition in their course. Regard them as left by others for you to master. Was there no difficulty remaining, you would have less scope for a genius of investigation; less honour in being barely followers of others. Both science and honour offer one fate to their votaries. They reward the courage of the brave and of the steady, and repel the faint hearted and irresolute. You have an ample field before you to cultivate. Inspired by a love of science, your diligent inquiry into natural causes and effects must produce discoveries; and these discoveries prompt you with fresh alacrity to new researches; an employment as delightful and honourable as it is advantageous.

ORDER requires that I should now address myself in particular

TO THE TRUSTEES OF THE COLLEGE.

To you HONOURED SIR, * and you GENTLEMEN who are trustees of this seminary, the respected patrons of literature, who alone can give force and stability to undertakings of such moment as this, I beg leave to return my warmest acknowledgements

* The governor of Pennsylvania, who is president of the trustees.

acknowledgements for the disposition you have shewn of encouraging every attempt to promote science in this place ; for your ready concurrence with my proposal of instituting medical schools in this seminary; and for the honour you have conferred on me, in appointing me a professor of the Theory and Practice of medicine. My gratitude cannot be manifested in a better manner, than in shewing the most scrupulous regard to the improvement of medical learning, and diligently prosecuting every measure which may be thought conducive to that end. I flatter myself nothing in my power shall be wanting to answer the great purposes of the institution.

THE learned Provost, vice Provost and faculty of the college have employed their unwearied care in cultivating every branch of academical knowledge ; and thus, with a success answerable to their wisdom and perseverance, have carried this seminary to a very high pitch of reputation. Their industry I shall set before me as an example worthy of imitation, and shall consult with them, in framing such rules as may be thought expedient for the better regulating of physical exercises, and fixing the medical schools on the most respectable footing. From their experienced judgement, and warm attachment to the interest of the college, I have room to hope for all the assistance they can yield me in carrying the design into execution.

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Being assured of this, it is yours to perfect the plan which I have briefly sketched out. Under your patronage we may hope that Medicine will put on the form of a regular science, and be cultivated with ardor and success; and that your influence will be employed to promote the several branches of it; to the establishment and perfection of which are annexed consequences, of the highest concern to the American colonies in general, to this province, this city, and this seminary in particular. It belongs to you to collect the scattered powers that are necessary to be united, in an attempt so important; and to transplant hither some of the most noble and beneficial sciences that mankind are blessed with, the seeds of which, so opportunely sown, will certainly produce a luxuriant growth of the most profitable knowledge.

PERHAPS this Medical institution, the first of its kind in America, though small in its beginning, may receive a constant increase of strength, and annually exert new vigour. It may collect a number of young persons, of more than ordinary abilities; and so improve their knowledge as to spread its reputation to distant parts. By sending these abroad duly qualified, or by exciting an emulation amongst men of parts and literature, it may give birth to other useful institutions of a similar nature, or occasional rise, by its example, to numerous.

merous societies of different kinds, calculated to spread the light of knowledge through the whole American continent, wherever inhabited.

SURE I am that you regard the rising youth as the growing hopes of the country. You ardently wish that they may become eminent, in every qualification which can render them an ornament, or a blessing to their fellow creatures. You are, no doubt, anxious to encourage a spirit of literature amongst them, and are attentive to procure them every advantage that may enable them to fill the higher offices of life, and especially the learned professions, with ability and dignity. Nor do I imagine you will neglect any occasion, such as this which now offers, to answer these salutary purposes. Destitute of culture, the imagination of youth shoots wild and unprofitable; but, directed by art and improved by science, a natural genius is like a rich soil, the fruitful source of many benefits to a country.

WHILST the studies of youth are prosecuted under the encouragement and patronage of men distinguished by their literature and worth, they have the highest motives that can animate the pursuits of a generous mind. They consider themselves as under the notice of the public, to which every ingenious person labours to approve himself.

A LOVE of fame and a laudable ambition allure him with the most powerful charms. These passions have, in all ages, fired the souls of heroes, of patriots, of lovers of science, have made them renowned in war, eminent in government and peace, justly celebrated for the improvement of polite and useful knowledge. They have powerfully influenced the perfection of arts, the advancement of commerce and the prosperity of cities. They have heightened the character of particular people to such a degree, as to make them regarded by other countries with admiration and esteem. Such I hope will be the consequence of your patronizing Medical science in this place.

THE difficulties of executing the proposed plan are inferior, far inferior to the glory of being first in such an undertaking. What grand enterprize was ever accomplished without any difficulties? If we have but resolution to master those which obstruct our design, they will only serve to heighten the lustre of its atchievement. Seize then the opportunity of executing a scheme so glorious in itself, and of such importance to this place: as you have given a beginning to the task, I doubt not to see it fully perfected in due time.

As the interest of literature and the interest of this province are concerned in it, the undertaking will meet with assistance and support from every lover of science

science and every worthy citizen. They will unite their mutual aids to render the foundation of it solid and permanent. The good of the community, the welfare of our fellow creatures, and the common ties of humanity will suggest the most powerful arguments in favour of it, with every person of a patriotic generous disposition. When, by an early and well placed assistance, every one of us may contribute to save the lives of thousands ; of thousands yet unborn ; and, in some sense, give being to thousands more who shall spring from them ; who does not feel himself warmly engaged in a design of such public utility ?

THE conscious reflection of contributing to instruct the rising generation, and to form them for public service, of cultivating the healing arts amongst us, and thus aswaging the calamities of disease, and relieving many miserable objects who labour under a load of poverty and sickness, cannot fail of giving an exalted pleasure to a benevolent mind. They experience it in the highest degree, who are most blessed with the refined sentiments of a tender and feeling humanity.

THE present Æra will be ever memorable in the annals of history, for the reputation of British valour, and the success and glory of the British arms, as well as distinguished by the reign of a King, the boast
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and joy of his people. Under his auspices, letters are cultivated, the arts flourish, and the sciences are protected with a paternal care. His regard for literature has been particularly extended to this seminary. Let us unite every power within us to render ourselves worthy of such royal bounty, and multiply, all we can, the benefits which our gracious sovereign has intended we should reap from it, by the most diligent culture of every species of useful knowledge. This will be a proof of the veneration we have for our monarch, who delights in the happiness and welfare of his subjects, the most distant of whom are near to him; and will testify how anxiously we desire to become, under his government, benefactors of mankind. The improvement of a science, useful as that of Medicine, adds lustre to a throne, and will perpetuate, to the latest posterity, the names of those who shall patronize and improve it.

OH! let it never be said in this city, or in this province, so happy in its climate, and its soil, where commerce has long flourished and plenty smiled, that science, the amiable daughter of liberty and sister of opulence, droops her languid head, or follows behind with a slow unequal pace. I pronounce with confidence this shall not be the case; but, under your protection, every useful kind of learning shall here fix a favourite seat, and shine forth

forth in meridian splendor. To accomplish which
may every heart and every hand be firmly united.

*Hoc opus, hoc studium parvi properemus et ampli,
Si patriæ volumus, si nobis vivere cari.*

Q. HORAT. FLAC. Epist. Lib. I. 3.

F I N I S.



